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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,732	06/30/2006	Klaus Finkenzeller	FINK3001/JJC/PMB	1969

23364 7590 08/16/2010

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EXAMINER	
TUN, NAY L	

ART UNIT	PAPER NUMBER
2612	

MAIL DATE	DELIVERY MODE
08/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,732	FINKENZELLER, KLAUS	
	Examiner	Art Unit	
	NAY TUN	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims status

1. In the amendment/request for reconsideration filed on May 05, 2010, no claim has been amended. Therefore, claims 1-16 are currently pending for examination.

Specification

2. The amendment to specification filed on October 10, 2009 has been entered.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 1-6, 8-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schuermann** (U. S. Patent No. 5,287,112) in view of **Charrat** et al. (hereinafter "**Charrat**" - U.S. Patent No. 6,905,074).

Regarding claim 1, **Schuermann** discloses a communication apparatus for setting up a data connection between intelligent devices, comprising:

• a transmission oscillator (resonant circuit 28) for carrying out a contactless data exchange, said oscillator including a coil (Column 4 Lines 42-44 and 50-52);

• a communication element (control circuit 16) which is connected to the coil and the data processing component of an intelligent device and which emits search signals via the coil to receive a response from another intelligent device (Column 3 Lines 46-54);

Schuermann does not disclose:

• a measuring device for monitoring a property of the transmission oscillator which outputs a control signal when ascertaining a change of the monitored property; and

• a switching apparatus which is connected to the measuring device and the communication element and which switches on the communication element when it has received a control signal from the measuring device.

However, the preceding limitations are known in the art of communications. **Charrat** discloses an RFID reader with an active standby mode comprising a measuring device for monitoring a property of the transmission oscillator which outputs a control signal when ascertaining a change of the monitored property (FIG. 3, 10 and Column 9 Lines 25-31, DETC3 measures the amplitude of the envelope signal of the transmitter coil and Column 9 Lines 38-55; microprocessor compares the amplitude with the threshold and deduces the presence of a contactless integrated circuit and Column 4, Lines 43-47: variations higher than a determined variation threshold); and a switching apparatus which is connected to the measuring device and the communication element and which switches on the communication element when it has received a control signal from the measuring device (Column. 11, Lines 7-12: saving on the current consumption of a reader using the invention. Therefore, one can easily see that part of the communication circuits can be powered down/switched off by the microprocessor on standby mode since sending identification request from the reader and receiving identification message from the tag do not need to be performing during the standby mode).

Therefore it would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine **Schuermann** with **Charrat** in order to send the identification request from the reader after the non-contact IC enters the proximity of the reader and therefore, prolongs battery life and/or saves energy of the reader (**Charrat**: Column 11 Lines 1-12).

Regarding claim 2, Schuermann in view of **Charrat** teaches the apparatus of claim 1 as discussed above. **Schuermann** further discloses an assembly that is switchable to the transmission oscillator via a switch (the tuning circuit consisting of capacitor 56 and resistor 58 connects to resonant circuit 34 via switch 54 to form new resonant circuit 60), said assembly causing an increase in the bandwidth of the oscillating circuit (Column 5 Lines 47-59; one of ordinary skill in the art could combine this arrangement from the transponder with the interrogator since it is known in the art that interrogators can act as transponders and receive data from other transponders).

Regarding claim 3, Schuermann in view of **Charrat** teaches the apparatus of claim 2 as discussed above. **Schuermann** further discloses that the assembly is a resistive element (the tuning circuit is a resistive element since it comprises a resistor).

Regarding claim 4, Schuermann in view of **Charrat** teaches the apparatus of claim 1 as discussed above. **Schuermann** further discloses including an assembly (capacitor 52) switchable to the transmission oscillator via a switch (switch 50), said assembly causing a change in the resonant frequency of the transmission oscillator (Column 5 Lines 13-19).

Regarding claim 5, Schuermann in view of **Charrat** teaches the apparatus of claim 4 as discussed above. **Schuermann** further discloses that the assembly causes a reduction in the resonant frequency (Column 5 Lines 13-15).

Regarding claim 6, **Schuermann** in view of **Charrat** teaches the apparatus of claim 4 as discussed above. **Schuermann** further discloses that that the assembly comprises a capacitor (see above).

Regarding claim 8, **Schuermann** in view of **Charrat** teaches the apparatus of claim 1 as discussed above. **Schuermann** in view of **Charrat** does not explicitly disclose the switching apparatus has a time controller for cyclically switching the measuring device on and off.

However, **Charrat** further discloses that pulses of 10 to 50 microseconds spaced out by 200ms (Column 7 Lines 17-37). Since the DETC circuit does not need to measure the amplitude between the pulses, one can easily see that it can be switched off for 200ms after detection of each pulse and switched on cyclically.

Therefore, it would have been obvious to the one of the ordinary skill in the art at the time of the invention was made to provide a switching apparatus with a time controller for cyclically switching the measuring device on and off in order to save the power more by turning off the idling components of the circuit and turning on only when required.

Regarding claim 9, **Schuermann** in view of **Charrat** teaches the apparatus of claim 8 as discussed above. **Charrat** further discloses that the time controller keeps the on state of the measuring device shorter than the off state (Column 7 Lines 17-27 and as modified in claim 8 above, pulse width i.e. the on state of the DETC is 10-50 microseconds long and off state will be 200ms).

Regarding claim 10, the combination of **Schuermann** in view of **Charrat** teaches the apparatus of claim 8 as discussed above. The combination further discloses that the measuring

device stores a measuring value obtained (**Charrat**: Column 9 Lines 37-55).

Regarding claim 11, **Schuermann** in view of **Charrat** and further in view of Nichols teaches the apparatus of claim 10 as discussed above. The combination further teaches the measuring device emits a control signal to the switching apparatus when a measuring value deviates from the average of the measuring values stored with the previous on phases (**Charrat**: Column 9 Lines 37-55)

Regarding claim 12, **Schuermann** in view of **Charrat** teaches the apparatus of claim 8 as discussed above. While the combination does not expressly disclose that when the intelligent device is switched on, the communication element is initially on and the measuring device off, this is an obvious matter of design choice (the specification of the present application does not seem to give a reason for or an advantage to having this arrangement), which does not patentably distinguish the invention over the prior art.

Regarding claim 15, **Schuermann** discloses a communication element designed to use a coil, which is part of a transmission oscillator, for automatically setting up a data connection with an intelligent device likewise having a communication element and a coil (see regarding claim 1 above). **Schuermann** does not disclose the method steps of:

• monitoring a parameter of the transmission oscillator by means of a measuring device;

• producing a control signal upon the occurrence of a change in the monitored property; and

• switching on the communication element by a switching apparatus due in response to the control signal.

However, the preceding limitations are known in the art of communications. **Charrat**

discloses an RFID reader with an active standby mode comprising a measuring device for monitoring a property of the transmission oscillator which outputs a control signal when ascertaining a change of the monitored property (FIG. 3, 10 and Column 9 Lines 25-31, DETC3 measures the amplitude of the envelope signal of the transmitter coil and Column 9 Lines 38-55; microprocessor monitors/compares the amplitude with the threshold and deduces the presence of a contactless integrated circuit and Column 4, Lines 43-47: variations higher than a determined variation threshold); and a switching apparatus which is connected to the measuring device and the communication element and which switches on the communication element when it has received a control signal from the measuring device (Column. 11, Lines 7-12: saving on the current consumption of a reader using the invention. Therefore, one can easily see that part of the communication circuits can be powered down/switched off by the microprocessor on standby mode since sending identification request from the reader and receiving identification message from the tag do not need to be performing during the standby mode).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine **Schuermann** with **Charrat** in order to send the identification request from the reader after the non-contact IC enters the proximity of the reader and therefore, prolongs battery life and/or saves energy of the reader (**Charrat**: Column 11 Lines 1-12).

5. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schuermann** in view of **Charrat** as applied to claim 1 above, and further in view of **Watkins** (U.S. Patent No. 6,317,027).

Regarding claim 7, **Schuermann** in view of **Charrat** teaches the apparatus of claim 1 as discussed above. The combination does not teach that the measuring frequency of the measuring device is sweepable over a predetermined frequency domain.

However, the preceding limitation is known in the art of communications. **Watkins** discloses an auto-tuning RFID reader, wherein a range of frequencies are scanned when searching for devices/transponders (Figure 2 and Column 3 Lines 44-62). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the apparatus of **Schuermann** in view of **Charrat** with the addition of sweeping over a frequency range as the motivation lies in **Watkins** that off-frequency tags/transponders can be more reliably detected (Column 2 Lines 13-23).

Regarding claim 16, **Schuermann** in view of **Charrat** teaches the method of claim 16 as discussed above. The combination does not teach that the measuring frequency of the measuring unit is swept over a given frequency domain during the monitoring of the property.

However, the preceding limitation is known in the art of communications. **Watkins** discloses an auto-tuning RFID reader, wherein a range of frequencies are scanned when searching for devices/transponders (Figure 2 and Column 3 Lines 44-62). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the method of **Schuermann** in view of **Charrat** with the addition of sweeping over a frequency range as the motivation lies in **Watkins** that off-frequency tags/transponders can be more reliably detected (Column 2 Lines 13-23).

6. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schuermann** in view of **Charrat** as applied to claim 1 above, and further in view of **Flaxl** (U.S. Patent No. 5,491,715).

Regarding claim 13, the combination of **Schuermann** in view of **Charrat** teaches the apparatus of claim 1 as discussed above. The combination does not disclose that the measuring device has a first oscillator device coupled at least temporarily with the coil for producing a first oscillation signal, and a second oscillator device for producing a second oscillation signal. However, the preceding is known in the art of communications. **Flaxl** discloses an antenna tuning method and circuit, wherein a first oscillator device (antenna resonance circuit 18) and a second oscillator device (osc/xmit circuitry 44) are fed into a phase comparator to perform adjustments to the device based on feedback (Figure 7 and Column 5 Line 33 - Column 4 Line 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the apparatus of **Schuermann** in view of **Charrat** with the circuit disclosed in **Flaxl** as the phase comparison circuit in **Flaxl** in addition to the change in magnitude in order to ascertain a change in the signal from the coil.

Regarding claim 14, **Schuermann** in view of **Charrat** and further in view of **Flaxl** teaches the apparatus of claim 13 as discussed above. The combination further teaches producing the control signal for the switching apparatus on the basis of a phase relation between the first and second oscillation signals or signals derived therefrom (in **Flaxl**, the phase comparator 60 outputs a signal to the control unit 50 which adjusts the antenna resonance circuit 18).

Response to Arguments

7. Applicant's arguments filed on May 05, 2010 have been fully considered but they are not persuasive.

On page 3-4, Applicants argue that "the proposed combination of Schuermann and Charrat does not teach or suggest a switching device which receives a control signal from the measuring device and switches on the communication element in response to the control signal". Examiner disagrees because Charrat teaches saving the power consumption of the reader (Col. 11 lines 7-12). Since Charrat's invention is directed toward the "pre-detection" before the actual data communication is performed and saving the power consumption, the one of the ordinary skill in the art understands that powering down the part of the circuits that are only required for data communication saves the power consumption. Examiner also notes that a switch can be implemented in the form of a software program executed by the controller/microprocessor in the light of specification paragraph [29-30].

On page 4, Applicants argue that "the proposed combination of Schuermann and Charrat does not teach or suggest a measuring device which monitors a property of the transmission oscillator and further outputs a control signal when it has sensed a change in the monitored property" and "the monitoring circuit (DECT3) of Charrat monitors a property of the envelope pulse, not of the coil". In response, Charrat discloses that DETC3 measures the amplitude of the envelope signal of the transmitter coil (Column 9 Lines 25-31) and microprocessor compares the amplitude with the threshold and deduces the presence of a contactless integrated circuit (Column 9 Lines 38-55). The amplitude of the envelope signal is of the coil L1(see FIG. 3) and therefore, can be interpreted as a property of the coil which forms the oscillating circuit together

with capacitor C1.

On Page 4, Applicants argue that "a property of the transmission oscillator would be the oscillator's frequency or impedance when operated in resonance (see paragraph [0045])" and "in contrast to Charrat, the search signals of the communication element are not emitted until the communication element is switched on by the switching element" and "the proposed combination of Schuermann and Charrat would not monitor the frequency of the resonant circuit". In response to applicant's argument, it is noted that the features upon which applicant relies are not recited in the rejected claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nay Tun whose telephone number is (571) 270-7939. The examiner can normally be reached on Mon-Thurs from 9:00-5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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